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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/787,453	SMETS ET AL.	
	Examiner	Art Unit	
	Preeti Kumar	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Non-Final Rejection

1. Claims 1-29 are pending.

Claim Objections

2. Claims 27-29 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim Should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).
3. Claims 8-14 and 16-29 are objected to because the phrase "and/or" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C." See *Ex Parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925).
4. Claims 10 and 12 are objected to for using abbreviations not defined in the applicant's disclosure.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 10-12, 14, 16, and 27-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claims 10, 14 and 16, the phrases recited in parenthesis render the claims indefinite because it is unclear whether the limitations within the parenthesis are part of the claimed invention.

Regarding claims 10, and 11-12, the material limitations of claims 10, 11 and 12 contain trademark/trade names. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade names used in the instant claims 10 and 12 identify/describe perfume and insect control agents and, accordingly, the identification/description is indefinite.

7. Claims 27-29 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap in the method for which patent protection is sought. See MPEP § 2172.01.

8. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. The claims are omnibus type claim because the limitations recited do not make clear or define the boundaries of the subject matter for which patent protection is sought.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-9, 14-16 and 24-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Fowler et al. (US 6,268,196).

Fowler et al. teach an improved method of treating cellulose containing fabrics with cellulose comprising contacting the cellulose fabrics with truncated cellulose enzyme. See abstract. Fowler et al. teach the utility of cellulases derived from *Trichoderma longibrachiatum* (previously classified as *Trichoderma reesei* in the treatment of cellulose containing fabrics. See col.8; ln.60-65. Also, bacterial cellulases from *Thermonospora* sp., *Cellulomonas* sp., *Bacillus* sp., are known to possess a binding domain region and a core region. Many cellulose enzymes, including cellulases from, for example, *T. longibrachiatum* and *Humicola insolens* are known to incorporate a catalytic core domain subunit which is attached via a linker region to a cellulose binding domain subunit. See col.11, ln.50-55 and col.7, ln.50-55.

Specifically regarding claims 14-16, Fowler et al. teach motivation of using a CBH I cellulose binding domain derived from *Trichoderma longibrachiatum* that when used in combination with some endoglucanase (EG) type components, the CBH I component of *Trichoderma longibrachiatum* imparts enhanced strength loss to the

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denim fabric. See col.10; ln.50-55. Fowler et al. also teach that protein analysis of the cellobiohydrolases (CBHI and CBHII) and major endoglucanases (EGI and EGII) of *T. longibrachiatum* has shown that a bifunctional organization exists in the form of a catalytic core domain and a smaller cellulose binding domain separated by a linker or flexible hydroxyamino acids. See col.3; ln.19-25. The cellulose binding domain and catalytic core of *Cellulomonas fimi* endoglucanase A (C.fimi Cen A) exhibit a similar bifunctional organization of cellulose enzymes. See col.3, ln.34-40.

Regarding claims 8-9, Fowler et al. teach that combination of the cellulose with a bleaching agent further improves the detergenting effects. See col.26, ln.33-39 and col.7, ln.15-25.

Regarding claims 2-5, Fowler et al. teach a linking region between the catalytically active amino acid sequence of a cellulolytic enzyme EGI and the amino acid sequence comprising a cellulose binding domain. See col.11; ln.50-55.

Regarding claim 26, Fowler et al teach the utility of anionic, nonionic, and cationic surfactants where in the composition may contain about 1 to 20 weight percent of cationic surfactants. See col.24 ln. 9-27 and col.25, ln.50-60.

In examples 1-5, Fowler et al. illustrate a chemical entity comprising more than one chemical components linked to an amino acid sequence comprising a cellulose binding domain as recited by the instant claims. See col.28-34. Accordingly the teachings of Fowler et al. anticipate the material limitations of the instant claims.

11. Claim 1-9, 13-14, 16, 19-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (WO 98/00500).

Jones et al. teach a composition comprising a peptide or protein Deposition Aid having a high affinity for fibers or a surface and attached/adsorbed to the peptide or protein deposition aid a benefit agent. The composition effectively deposits the Benefit Agent onto fabric during the wash cycle. See abstract.

Regarding claims 2-5 and 22, Jones et al. teach that if the peptide/protein Deposition Aid is not an enzyme, it can have a chemical structure similar or identical in structure to that of a binding site of an enzyme. See claim 8. Jones et al. teach that if the benefit is attached to the peptide/protein Deposition Aid, this is via a linking agent. Suitable linking agents are molecules with show a high affinity for the Benefit Agent. It is preferred if the linking agent is covalently attached to the peptide/protein Deposition Aid, it is also advantageous if the linking agent is covalently bound to the Benefit agent. Preferred linking agents are selected from various amino acid linking agents. See pg.7, ln.20-35 & pg.8, ln.1-3 & claims 2-4.

In regard to claim 6-7, 14, 16, and 19 Jones et al. teach the utility of cellulase from *Trichoderma reesei* and *Thermonospora fusca*. See example 4 on page 23.

Specifically regarding claims 24-29, Jones et al. discloses a fabric care composition comprising a deposition aid having a high affinity for cellulose, which is a cellulose binding domain derived from cellulase, a benefit agent, a surfactant and a protease. See pages 4-8.

Regarding claims 8-9, 13 and 23, Jones et al. teach a preferred benefit agent is selected from a fabric softening agent, a perfume, a latex, a resin, an insecticide, a soil

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release agent, or a soil repelling agent. See pg.5 ln.5-15; pg.7, ln.12-16; pg.13, ln.20-30; pg.15, ln.20-30, & claim 10.

Regarding claim 26, Jones et al. teach in compositions for machine washing of fabrics the utility of cationic surfactants. See pg.5 ln.5-15.

In examples 1-5, Jones et al. illustrate a chemical entity comprising more than one chemical components linked to an amino acid sequence comprising a cellulose binding domain as recited by the instant claims. See pages 17-30. Accordingly the teachings of Jones et al. anticipate the material limitations of the instant claims.

12. Claims 10-12, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (WO 98/00500) as applied to claims 1-9, 13-14, 16, and 19-29 above, and further in view of Cao et al. (US 6,025,316).

Jones et al. are relied upon as set forth above.

However, Jones et al. do not specifically teach a chemical entity, wherein the chemical entity is an aldehyde based perfume, a hygiene agent or insect control agent as specified by the instant claims 10-12.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made to formulate a chemical entity comprising a perfume selected from an aldehyde based component because Jones et al. teach an encapsulated perfume or insect repellent benefit agent and suggest the encapsulating material include starches and poly vinyl acetate and urea/formaldehyde condensate based materials. See pg.7, ln.10-16.

Also, Jones et al. do not specifically teach a linking region that is a polyethylene glycol derivative polymer as recited by the instant claims 17-18. However, Jones et al. teach non amino acid linking agents as their preferred linking agents (such as 1-ethyl-3-(3-dimethylaminopropyl)) which shows a high affinity for the benefit agent and is covalently attached to the peptide/protein deposition agent. See pg.7, ln.30- pg.8, ln.5.

Cao et al. teach a detergent composition formulated for use in wash water over a wide range of pH in the washing bath. The compositions contain an anionic surfactant, optionally in combination with a nonionic surfactant with optimal builders and enzymes, and also contain at least one water soluble organic polymer, such as polyethylene glycol, which is miscible with or soluble in the surfactant. The presence of the water soluble polymer leads to enhanced fabric cleaning performance. See abstract. In example 1, formulation C and example 2, formulation F, Cao et al. illustrate that the PEG polymer linker not only can bind with conventional molecules such as surfactants and bring them close to the fabric surface, but can "link" also unconventional complex molecules such as enzymes. See col.10-11.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry care composition comprising a linking region polymer selected from a polyethylene glycol derivative as recited by the instant claim, with a reasonable expectation of success, since the teachings of Jones et al. in combination with Cao et al. suggest a laundry care composition comprising a linking region polymer selected from a polyethylene glycol derivative as recited by the instant claim. Furthermore, one of ordinary skill in the art would have been motivated to

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combine the teachings of Jones et al. with Cao et al. because both teach the utility of linking agents in general.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Preeti Kumar
Examiner
Art Unit 1751

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